

L5 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:696922 CAPLUS

DOCUMENT NUMBER: 143:133627

TITLE: penta-O-galloyl-D-glucose (PGG) enantiomeric separation and purification by crystallization in water

INVENTOR(S): Ren, Yulin

PATENT ASSIGNEE(S): Ohio University, USA

SOURCE: PCT Int. Appl., 13 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|------------------|------------|
| WO 2005070943 | A1 | 20050804 | WO 2005-US2262 | 20050124 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2554190 | A1 | 20050804 | CA 2005-2554190 | 20050124 |
| EP 1713817 | A1 | 20061025 | EP 2005-711954 | 20050124 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | |
| CN 1930178 | A | 20070314 | CN 2005-80005577 | 20050124 |
| JP 2007518821 | T | 20070712 | JP 2006-551386 | 20050124 |
| US 20080249299 | A1 | 20081009 | US 2006-597395 | 20060724 |
| IN 2006CN03055 | A | 20070608 | IN 2006-CN3055 | 20060822 |
| PRIORITY APPLN. INFO.: | | | US 2004-538698P | P 20040123 |
| | | | WO 2005-US2262 | W 20050124 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A simple, inexpensive, and efficient method for separation and purification of the

α - and β - FORMS OF penta-O-galloyl-D-glucose (PGG) without the need for HPLC. The methods provided herein are useful for separating α -PGG or β -PGG from a mixture that contains α -PGG and β -PGG and other chems. The method for separation of α -PGG from a mixture of α -PGG and β -PGG comprises the steps of: adding water to a sample containing 50% or more α -PGG and 50% or less β -PGG; mixing the PGG and water to dissolve the PGG; filtering out any undissolved particles; and allowing the filtered solution to stand undisturbed until crystals form.

IT 70470-10-9P

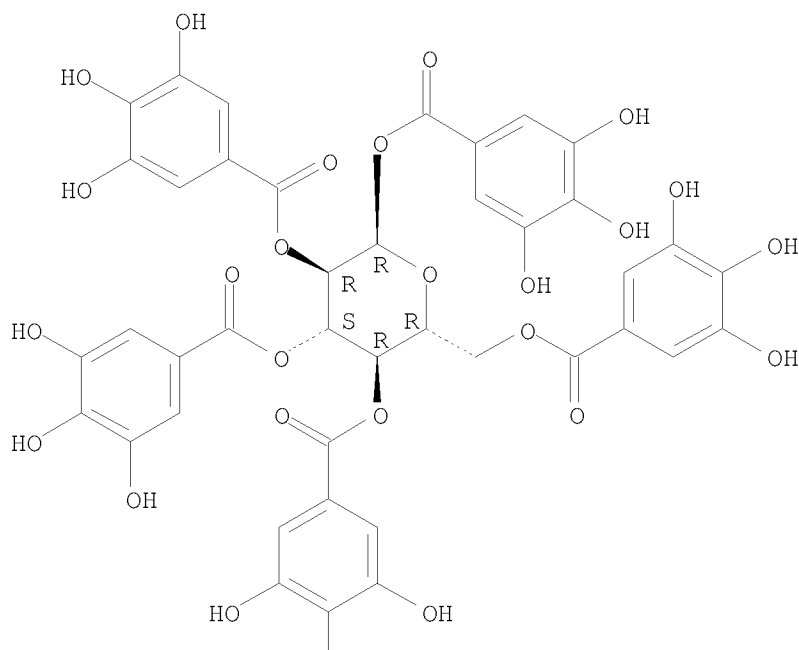
RL: PUR (Purification or recovery); PREP (Preparation)

(penta-O-galloyl-D-glucose (PGG) enantiomeric separation and purification by crystallization in water)

RN 70470-10-9 CAPLUS

CN α -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:80512 CAPLUS

DOCUMENT NUMBER: 140:122810

TITLE: Methods and compositions for treating diabetes mellitus and related conditions with gallotannins

INVENTOR(S): Chen, Xiao; Li, Yun Sheng; Li, Jing; Liu, Fang

PATENT ASSIGNEE(S): Ohio University, USA

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2004009094 | A1 | 20040129 | WO 2002-US23523 | 20020724 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2496912 A1 20040129 CA 2002-2496912 20020724
AU 2002322623 A1 20040209 AU 2002-322623 20020724
EP 1545554 A1 20050629 EP 2002-756627 20020724

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

CN 1668311 A 20050914 CN 2002-829635 20020724
JP 2005538987 T 20051222 JP 2004-522925 20020724
IN 2005CN00054 A 20070907 IN 2005-CN54 20050124
IN 221266 A1 20080801
US 20060058243 A1 20060316 US 2005-522662 20050909

PRIORITY APPLN. INFO.: WO 2002-US23523 W 20020724

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 140:122810

AB Methods are claimed for modulating diabetes, impaired glucose tolerance, gestational diabetes and glucose resistance in a mammal, particularly a human. In one embodiment the method comprises administering a gallotannin composition to a mammal in need of the same. The gallotannin composition comprises

one or more select hydrolyzable gallotannins. In another embodiment the method comprises administering a gallotannin variant composition comprising one or more select gallotannin variant compds. to the subject. Methods of preventing or treating weight gain in a subject. The method comprises administering the gallotannin composition of the present invention, the gallotannin variant composition of the present invention, or a combination of the gallotannin composition of the present invention and the gallotannin variant composition of the present invention to the subject. The present invention also relates a gallotannin variant compound or a salt thereof, and a pharmaceutical composition comprising such compound or the salt thereof.

IT 70470-10-9, 1,2,3,4,6-Penta-O-galloyl- α -D-glucose

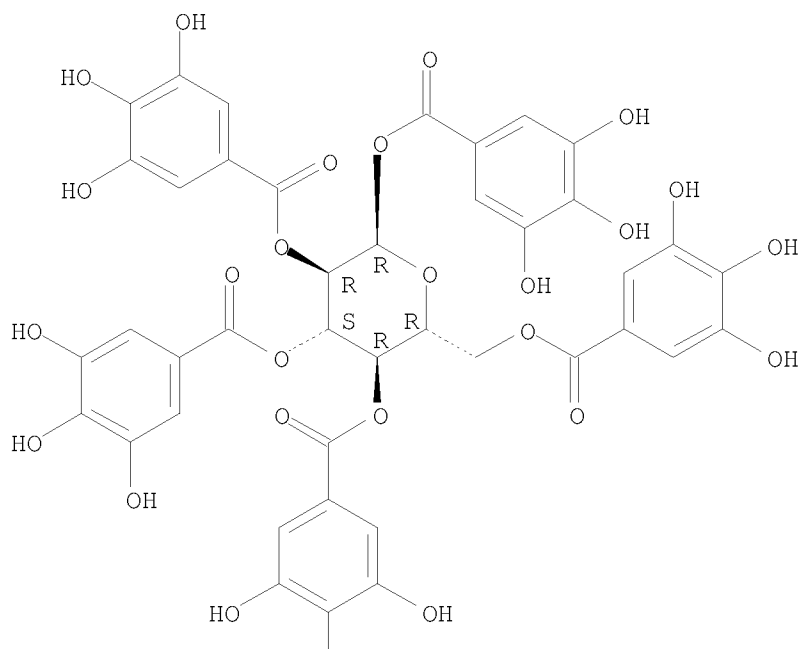
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methods and compns. for treating diabetes mellitus and related conditions with gallotannins)

RN 70470-10-9 CAPLUS

CN α -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1999:470146 CAPLUS

DOCUMENT NUMBER: 131:253871

TITLE: Binding affinities of gallotannin analogs with bovine serum albumin: ramifications for polyphenol-protein molecular recognition

AUTHOR(S): Feldman, K. S.; Sambandam, A.; Lemon, S. T.; Nicewonger, R. B.; Long, G. S.; Battaglia, D. F.; Ensel, S. M.; Laci, M. A.

CORPORATE SOURCE: Department of Chemistry, The Pennsylvania State University, University Park, PA, 16802, USA

SOURCE: Phytochemistry (1999), 51(7), 867-872

CODEN: PYTCAS; ISSN: 0031-9422

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

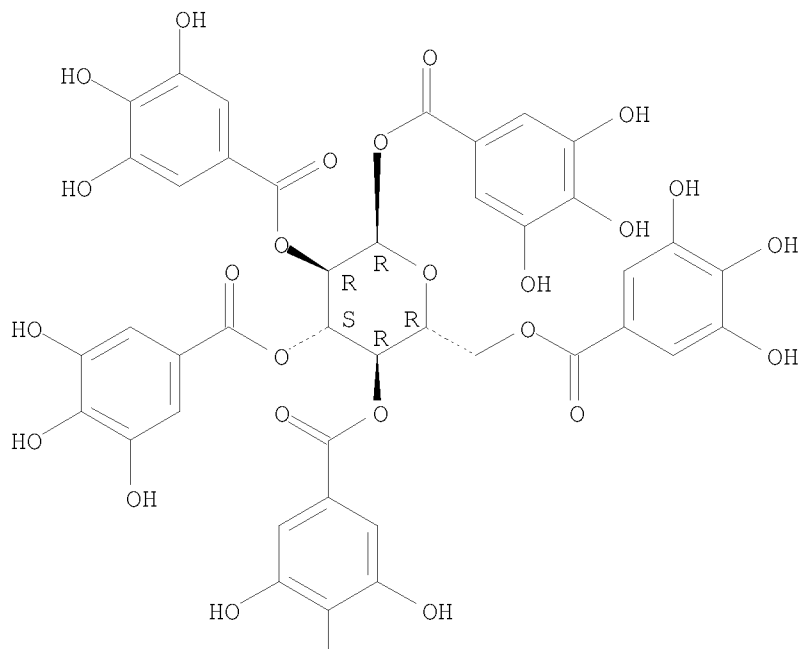
OTHER SOURCE(S): CASREACT 131:253871

AB A series of gallotannin analogs were prepared by chemical synthesis, and their affinity for the test-case protein bovine serum albumin was measured by equilibrium dialysis. The structure/activity data obtained suggest that the naturally occurring gallotannins, in fact, do not represent the optimal protein recognition agents amongst polyphenolated templates.

IT 70470-10-9
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (binding affinities of gallotannin analogs with bovine serum albumin
 and ramifications for polyphenol-protein mol. recognition)
 RN 70470-10-9 CAPLUS
 CN α -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA
 INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 2-A



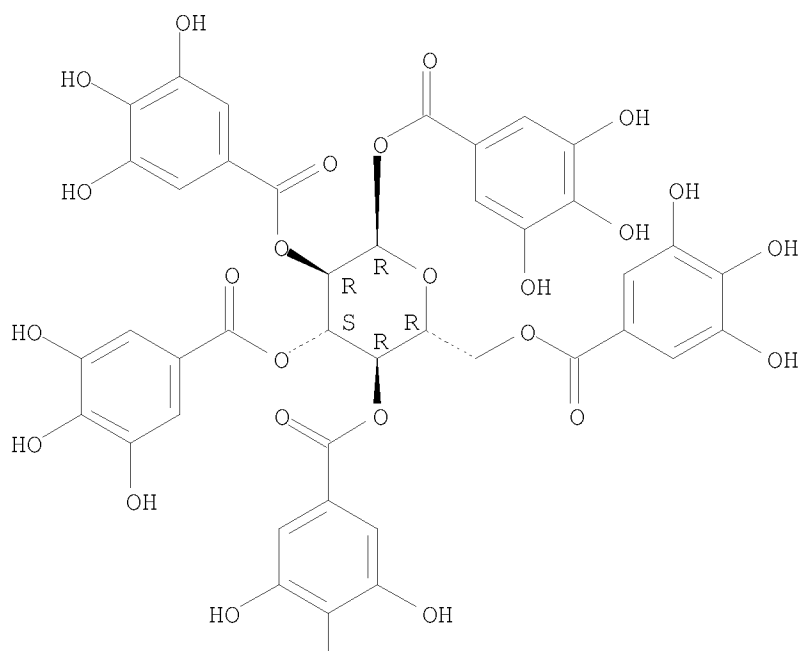
OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS
 RECORD (24 CITINGS)
 REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 1998:787672 CAPLUS
 DOCUMENT NUMBER: 130:165502
 TITLE: Gallotannins from Quercus robur cultivated in Egypt
 AUTHOR(S): Farag, Salwa F.; El-Emary, Nasr A.; Niwa, Masatake
 CORPORATE SOURCE: Department of Pharmacognosy, Faculty of Pharmacy,
 Assiut University, Assiut, 71526, Egypt
 SOURCE: Bulletin of Pharmaceutical Sciences, Assiut University
 (1998), 21(1), 1-6
 CODEN: BPAUEC; ISSN: 1110-0052
 PUBLISHER: Assiut University Press

DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Four gallotannins 1,2,3-tri-O-galloyl- β -D-glucose;
 1,2,3,6-tetra-O-galloyl- β -D-glucose;
 1,2,3,4,6-penta-O-galloyl- β -D-glucose and
 1,2,3,4,6-penta-O-galloyl- α -D-glucose, together with gallic acid and
 methoxy gallic acid have been isolated from the seeds of *Quercus robur* and
 their structures were elucidated on the basis of chemical and spectral
 evidence.
 IT 70470-10-9, 1,2,3,4,6-Penta-O-galloyl- α -D-glucose
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (from *Quercus robur*)
 RN 70470-10-9 CAPLUS
 CN α -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA
 INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 2-A



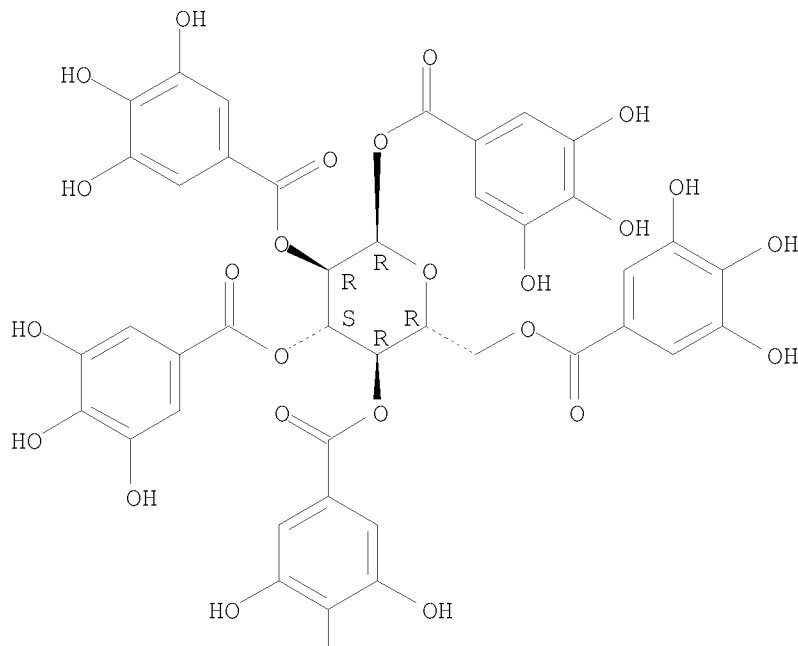
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)
 REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 1997:535644 CAPLUS
 DOCUMENT NUMBER: 127:190922

ORIGINAL REFERENCE NO.: 127:37037a,37040a
 TITLE: Efficient total synthesis of the natural products
 2,3,4,6-tetra-O-galloyl-D-glucopyranose,
 1,2,3,4,6-penta-O-galloyl- β -D-glucopyranose and
 the unnatural 1,2,3,4,6-penta-O-galloyl- α -D-
 glucopyranose
 AUTHOR(S): Khanbabaee, Karamali; Lotzerich, Kerstin
 CORPORATE SOURCE: Universitat-GH-Paderborn, Fachbereich 13 - Organische
 Chemie, Paderborn, D-33098, Germany
 SOURCE: Tetrahedron (1997), 53(31), 10725-10732
 CODEN: TETRAB; ISSN: 0040-4020
 PUBLISHER: Elsevier
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A short synthesis of the natural products
 2,3,4,6-tetra-O-galloyl-D-glucopyranose,
 1,2,3,4,6-penta-O-galloyl- β -D-glucopyranose and the unnatural
 1,2,3,4,6-penta-O-galloyl- α -D-glucopyranose was achieved based on an
 efficient esterification reaction of a benzylated gallic acid with
 α,β -glucopyranoses.
 IT 70470-10-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of the natural products tetragalloyl-D-glucopyranose,
 pentagalloyl -D-glucopyranose and pentagalloyl-D-glucopyranose)
 RN 70470-10-9 CAPLUS
 CN α -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA
 INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



|
OH

OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)
 REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1987:605013 CAPLUS

DOCUMENT NUMBER: 107:205013

ORIGINAL REFERENCE NO.: 107:32815a,32818a

TITLE: Tannins and related compounds. LVIII. Novel gallotannins possessing an α -glucose core from *Nuphar japonicum* DC

AUTHOR(S): Nonaka, Genichiro; Ishimatsu, Makoto; Tanaka, Takashi;

Nishioka, Itsuo; Nishizawa, Makoto; Yamagishi, Takashi

CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1987), 35(8), 3127-31

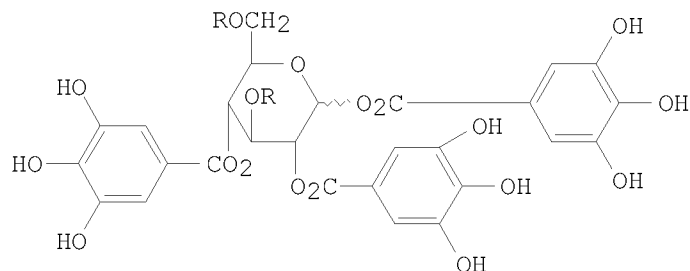
CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 107:205013

GI



I, R=H

II, R=COC₆H₂(OH)_{3-3, 4, 5}

AB Together with 6-O- and 2,3,4,6-tetra-O-galloyl glucoses, 2 unusual gallotannins possessing an α -glucopyranose core were isolated from the rhizomes of *N. japonicum*, and their structures were established as I and II on the basis of chemical and spectroscopic evidence.

IT 70470-10-9

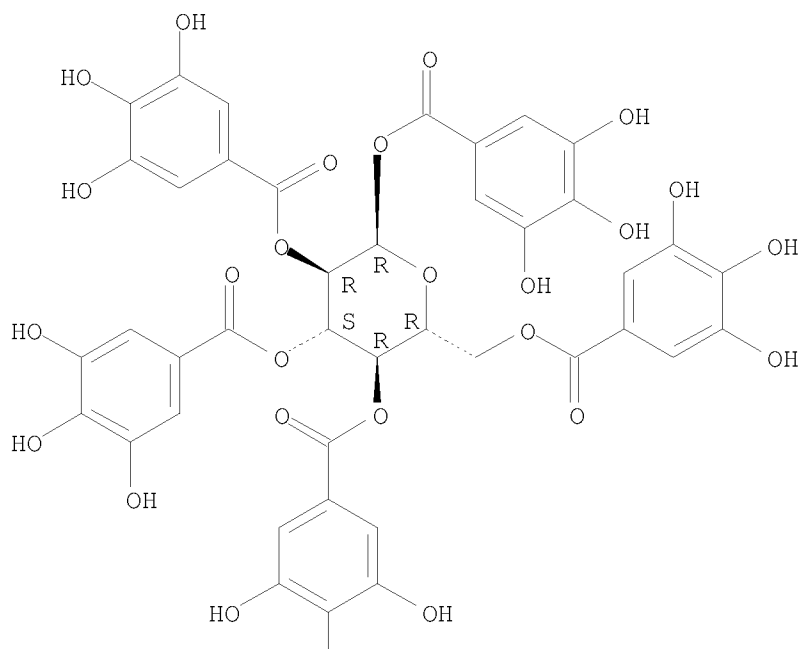
RL: PROC (Process)

(of *Nuphar japonicum* rhizomes, structure determination of)

RN 70470-10-9 CAPLUS

CN α -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L5 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1982:403544 CAPLUS

DOCUMENT NUMBER: 97:3544

ORIGINAL REFERENCE NO.: 97:715a,718a

TITLE: Novel hydrolyzable tannins from *Nuphar japonicum* DC

AUTHOR(S): Nishizawa, Makoto; Yamagishi, Takashi; Nonaka, Genichiro; Nishioka, Itsuo; Bando, Hideo

CORPORATE SOURCE: Hokkaido Inst. Public Health, Sapporo, 060, Japan

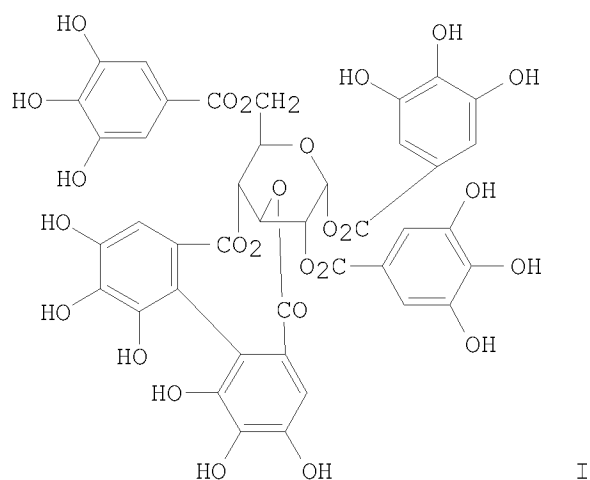
SOURCE: Chemical & Pharmaceutical Bulletin (1982), 30(3), 1094-7

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Two gallotannins (I and II) and an ellagitannin (III) named nupharin A were isolated from *N. japonicum* (Nymphaeaceae). On the basis of chemical and spectral evidence, the structures of I, II and III were characterized as 1,2,6-tri-O-galloyl- α -D-glucose, 1,2,3,4,6-penta-O-galloyl- α -D-glucose, and 1,2,6-tri-O-galloyl-3,4-(S)-hexahydroxydiphenoyl- α -D-glucose, resp.

IT 70470-10-9

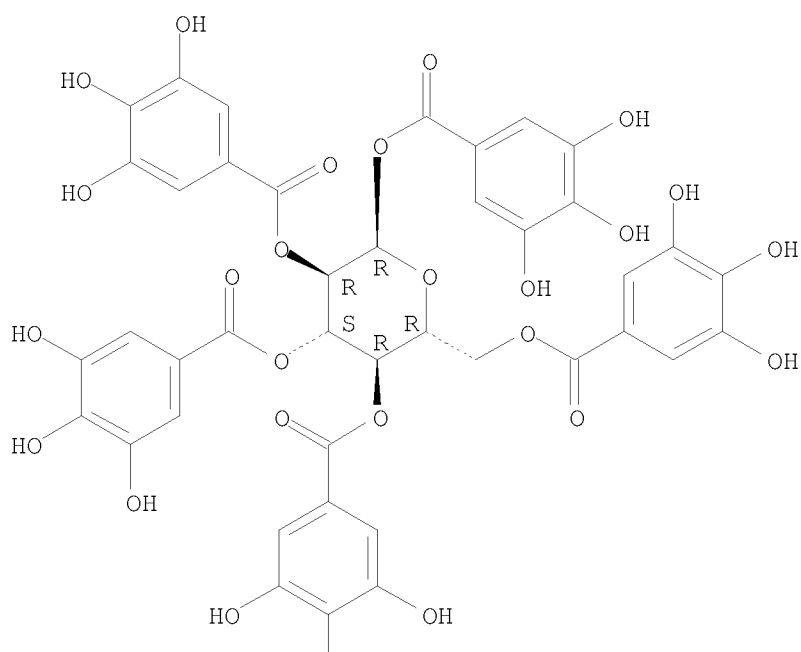
RL: BIOL (Biological study)
(from *Nuphar japonicum*)

RN 70470-10-9 CAPLUS

CN α -D-Glucopyranose, 1,2,3,4,6-pentakakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



|
OH

OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS
RECORD (11 CITINGS)

L5 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1979:405441 CAPLUS

DOCUMENT NUMBER: 91:5441

ORIGINAL REFERENCE NO.: 91:1019a,1022a

TITLE: Penta-O-galloyl- β -glucose useful as hypoglycemic agent

INVENTOR(S): Carraz, Gilbert Louis Marius; Willemot, Jacques; Demenge, Pierre

PATENT ASSIGNEE(S): Fr.

SOURCE: Fr. Demande, 11 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|----------------|----------|-----------------|----------|
| ----- | --- | ----- | ----- | ----- |
| FR 2380299 | A1 | 19780908 | FR 1977-3610 | 19770209 |
| PRIORITY APPLN. INFO.: | | | FR 1977-3610 | 19770209 |
| OTHER SOURCE(S): | MARPAT 91:5441 | | | |

AB The title compound (I) was prepared by benzylating Me gallate, hydrolyzing benzyl derivative to the acid, chlorinating, treating the chloride with α -D-glucose, and debenzylating. I was also isolated, together with ellagic acid glucosides, from Punica granatum, variety albescens, roots. The extract was hypoglycemic i.p. in mice.

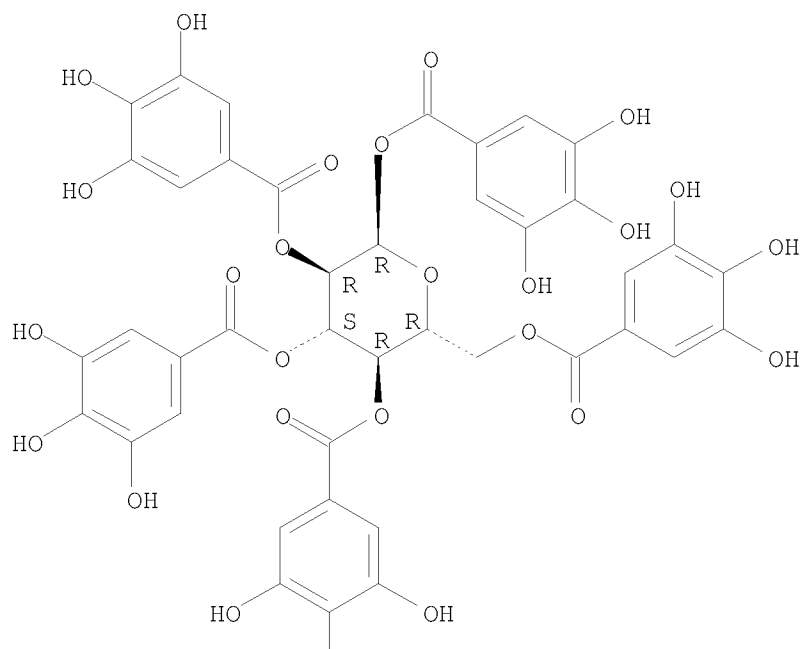
IT 70470-10-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and antidiabetic activity of)

RN 70470-10-9 CAPLUS

CN α -D-Glucopyranose, 1,2,3,4,6-pentakakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)